

REMARKS / ARGUMENTS

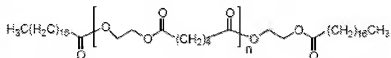
I. General Remarks and Disposition of the Claims

Please consider the application in view of the following remarks. Applicants thank the Examiner for careful consideration of this application, including the references that Applicants have submitted in this case and, pursuant to MANUAL OF PATENT EXAMINING PROCEDURE §609.02, all references submitted in the patent applications to which this application claims priority under 35 U.S.C. §120.

At the time of the Office Action, claims 42-61 were pending in this application. Claims 42-61 were rejected in the Office Action. By this paper, claims 47, 53, and 60 have been amended. These amendments are supported by the specification as filed. All the amendments are made in a good faith effort to advance the prosecution on the merits of this case. It should not be assumed that the amendments made herein were made for reasons related to patentability. Applicants respectfully request that the above amendments be entered and further request reconsideration in light of the amendments and remarks contained herein.

II. Remarks Regarding Rejections under 35 U.S.C. § 112

Claim 60 stands rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. The Office Action states that the recitation in claim 60 of "partially fatty acid ester" has been interpreted as "partially esterified fatty acid ester" and "poly(ethylene adipate)disterate" has been interpreted as "poly(ethylene adipate)/distegrate." Applicants have amended claims 47, 53, and 60 to recite "partially esterified fatty acid" and "poly(ethylene adipate)distegrate." The term poly(ethylene adipate)distearate refers to the following compound:



Applicants request that the rejection over § 112 be withdrawn.

III. Remarks Regarding Rejections under 35 U.S.C. § 103(a)

A. Claims 42-48, 55-59, and 61 over *Nguyen* in view of *Lee* and *Still*

Claims 42-48, 55-59, and 61 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,209,643 to *Nguyen et al.* (hereinafter "*Nguyen*") in view of U.S. Patent No. 6,817,414 to *Lee et al.* (hereinafter "*Lee*") and U.S. Patent No. 7,166,560 to *Still et al.* (hereinafter "*Still*").

Applicants respectfully disagree. To support an obviousness rejection, MPEP § 2143.03 requires that "all words of a claim to be considered" and MPEP §2141.02 requires consideration of the "[claimed] invention and prior art as a whole." Further, the Board of Patent Appeals and Interferences recently confirmed that a proper, post-KSR obviousness determination still requires the Examiner make a "searching comparison of the claimed invention – including all its limitations – with the teaching of the prior art." (*In re Wada and Murphy*, Appeal 2008-3733, citing *In re Ochia*, 71 F.3d 1565, 1572 (Fed. Cir. 1995) and *CFMT v. Yieldup Intern. Corp.*, 349 F.3d 1333, 1342 (Fed. Cir. 2003)). In sum, it remains well-settled law that an obviousness rejection requires at least a suggestion of all of the claim elements. Applicants respectfully submit that due to the differences between the claims as currently amended and the cited references, the Examiner has not established a *prima facie* case of obviousness, in that the combination of *Nguyen*, *Lee*, and *Still* does not establish that each limitation of the present claims was known in the prior art.

None of *Nguyen*, *Lee*, or *Still* disclose the following element in claim 42: "combining an acid-releasing degradable material with a solvent or a plasticizer to create a coating solution" that can be coated onto particulates "on-the-fly." And, with respect to claim 55, none of *Nguyen*, *Lee*, or *Still* disclose the following element: "combining an acid-releasing degradable material with a plasticizer to create a coating solution, with the proviso that the plasticizer does not comprise a starch" that can be coated onto particulates "on-the-fly."

In the present case, a solid degradable material is made coatable through the use of a claimed solvent or plasticizer. Applicants have discovered that they could create such a coatable material that would continue to act as an acid-producer down hole even though it had already been rendered coatable. Thus, is it impermissible

hindsight to combine the acid-releasing materials described in *Lee* and *Still* with the liquefied tackifying solutions of *Nguyen*.

The Office Action at page 15 indicates that “*Nguyen* teaches that the treatment chemical may be absorbed or coated on the proppant or even may be in solid particulate form ... the treatment chemical may be introduced into a treating fluid either in solid particulate form or in liquid form in a similar manner as a tackifying compound, *i.e.* in the form of a solution in a solvent.” While *Nguyen* describes the fact that a solvent can be used with the tackifying agent in order to create a liquid solution of the tackifying agent, this disclosure is immaterial to the form (liquid or solid) of the treatment chemical. (*Nguyen* at col. 5, ll. 55-58). *Nguyen* does not describe the use of a solvent or plasticizer to create an on-the-fly coatable treatment chemical, rather *Nguyen* teaches that a solvent can be used to affect the form of the tackifying agent itself.

The Office Action at pages 4-5 relies on *Lee* as teaching the replacement of conventional gravel pack sand with “polymerized alpha-hydroxycarboxylic acid coated proppants such as polyglycolic-acid-coated sand.” Applicants note that the pending claims are not directed to simply coated particulates. In *Lee*, the disclosure teaches polymerizing a monomer of glycolic acid in presence of proppant by heating to an elevated temperature. (*Lee* at col. 3, l. 64 – col. 4, l. 11). That is, *Lee* performs condensation polymerization with the removal of water in the presence of the particulate; this is not a method amenable to on-the-fly use at the well site. By contrast, the pending claims take an already prepared polymer and make it into a coatable substance by the addition of a solvent or plasticizer.

Nguyen, *Lee*, and *Still*, taken together, do not disclose “combining an acid-releasing degradable material with a solvent or a plasticizer to create a coating solution” and then coating that solution “on-the-fly” as required by independent claim 42, or “combining an acid-releasing degradable material with a plasticizer to create a coating solution” and then coating that solution “on-the-fly” as required by independent claim 55. Thus, *Nguyen*, *Lee*, and *Still* cannot form a *prima facie* case of obviousness with respect to claims 42 or 55. Accordingly, Applicants respectfully request withdrawal of this rejection with respect to claims 42-48 and 55-60.

With respect to dependent claims 48, 54, and 61, the Examiner alleges that the limitation is optional. (Office Action at pp. 9 and 15). Applicants respectfully disagree. Specifically, the limitation is not optional because those claims require the acid-releasing degradable material to comprise a poly(orthoester). As the Office Action notes, claim 42 does not require the presence of poly(orthoester)." (Office Action at p. 15). Applicants agree that claim 42 does not require that element, but the dependent claim at issue does make that element required. That is, while the acid-releasing degradable material must comprise at least one of the materials listed in the *Markush* group of the claims from which they depend, the additional limitation introduced in claims 48, 54, and 61 requires that the acid-releasing degradable material comprise a specific material—namely a poly(orthoester)—even if other materials are present. Thus, Applicants again request that the limitation be given the proper patentable weight during prosecution.

With respect to claim 55, the Examiner states that "plasticizer is commonly used as an additive in fracturing fluids." (Office Action at p. 10). Applicants respectfully request appropriate evidentiary support. Additionally, to the extent that the Examiner is relying upon "common knowledge" or "well known" principles to establish the rejection, Applicants request that a reference be provided in support of this position pursuant to MPEP § 2144.03. Furthermore, to the extent that the Examiner maintains any rejection based on an "Official Notice" or other information within the Examiner's personal knowledge, Applicants respectfully request that the Examiner cite a reference as documentary evidence in support of this position or provide an affidavit in accordance with MPEP § 2144.03 and 37 C.F.R. 1.104(d)(2).

Therefore, Applicants submit that claims 42-48, 55-59, and 61 are not obviated by the combination of *Nguyen*, *Lee*, and *Still*. Accordingly, Applicants respectfully request withdrawal of this rejection with respect to claims 42-48, 55-59, and 61.

B. Claims 42-48, 55-59, and 61 over *Nguyen*, *Lee*, *Still*, and *Murphey*

Claims 42-48, 55-59 and 61 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over *Nguyen* in view of *Lee* and *Still*, and further in view of U.S. Patent No. 4,829,100 to *Murphey*, *et al.* (hereinafter "*Murphey*").

As discussed above in Section III.A., the combination of *Nguyen, Lee, and Still* fails to establish that every limitation of independent claims 42 and 55 was known in the prior art. *Murphey* fails to render obvious the deficiencies of *Nguyen, Lee, and Still*. Rather, the Examiner merely relied on *Murphey* for its alleged teaching that a particulate "can be coated rapidly and continuously by admixing in a stream (on-the-fly) . . . instead of batch mixing which requires a period of time..." See Office Action at 10. Claims 43-48, 56-59 and 61 depend, either directly or indirectly, from claims 42 and 55 and therefore include all the limitations of those independent claims, respectively, including limitations directed to combining an acid-releasing degradable material with a solvent/plasticizer. Thus, claims 43-48, 56-59 and 61 are patentable over the combination of *Nguyen, Lee, Still, and Murphey*. (35 U.S.C. §112, paragraph 4). Accordingly, for at least these reasons, Applicants respectfully request withdrawal of this rejection.

C. Claims 42-48, 55-59, and 61 over *Nguyen, Lee, Still, and McDougall*

Claims 42-48, 55-59, and 61 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Nguyen* in view of *Lee* and *Still*, and further in view of U.S. Patent No. 5,192,615 to McDougall *et al.* (hereinafter "*McDougall*").

As discussed above in Section III.A., the combination of *Nguyen, Lee, and Still* fails to establish that every limitation of independent claims 42 and 55 was known in the prior art. *McDougall* fails to render obvious the deficiencies of *Nguyen, Lee, and Still*. Rather, the Examiner merely relied on *McDougall* for its alleged teaching of adding a friction reducing agent such as polyacrylamide or alcohol to the fluid suspension of *Nguyen*. Office Action at 11. Applicants note that the Examiner appears to be indicating that simply combining any of the components of *McDougall* with a fluid used in a fracturing operation would meet the limitations of the claims. However, the claims are specific as to what components are combined and cannot therefore be taught by simple additives in a fluid, where they may or may not combine with any of the other components. Claims 43-48 and 56-60 depend, either directly or indirectly, from claims 42 and 55 and therefore include all the limitations of those independent claims, respectively. Thus, claims 42-48, 55-59, and 61 are patentable over the combination of

Nguyen, Lee, Still, and McDougall. (35 U.S.C. §112, paragraph 4). Accordingly, for at least these reasons, Applicants respectfully request withdrawal of this rejection.

D. Claims 42-61 over *Nguyen, Lee, and further in view of Murphey, McDougall, or Mikos*

Claims 42-61 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over *Nguyen* in view of *Lee* and *Still*, or over *Nguyen* in view of *Lee* and *Still*, further in view of *Murphey* or over *Nguyen* in view of *Lee* and *Still*, further in view of *McDougall*, and further in view of Patent Application No. WO 9425079A1 to Mikos *et al.*, (related to 6,689,608) (hereinafter "*Mikos*").

As discussed above in Section III.A., the combination of *Nguyen, Lee, and Still* fails to establish that every limitation of independent claims 42 and 55 was known in the prior art. The argument with respect to independent claim 42 is equally applicable to independent claim 49. *Mikos* fails to render obvious the deficiencies of *Nguyen, Lee, and Still*. Rather, the Examiner merely relied on *Mikos* for its alleged teaching of certain degradable synthetic polymers and noted that "it is well known in the art that all these polymers hydrolyze with release of an acid." (Office Action at p. 12). Applicants note that *Mikos* is directed towards medical devices, but as to the issue of what is "well known in the art," the art of medical devices is not the art at issue. (*Mikos* Abstract). Thus, it is not surprising that *Mikos* does not disclose at least "combining an acid-releasing degradable material with a solvent or a plasticizer to create a coating solution" as required by independent claims 42 or 49, or "combining an acid-releasing degradable material with a plasticizer to create a coating solution" as required by independent claim 55. *Mikos* does not seek to make a degradable material coatable, but rather seeks to use a solid degradable material as "scaffolding" for tissue growth. (*Mikos* at col. 4, l. 66 – col. 5, l. 3).

Claims 43-48, 50-54, and 56-61 depend, either directly or indirectly, from claims 42, 49, and 55 and therefore include all the limitations of those independent claims, respectively. Thus, claims 42-61 are patentable over the combination of *Nguyen, Lee, Still, and Mikos*. (35 U.S.C. §112, paragraph 4). Accordingly, for at least these reasons, Applicants respectfully request withdrawal of this rejection.

E. Claims 42-61 over *Nguyen, Lee, and Still* or over *Nguyen, Lee, Still, and Murphey* or over *Nguyen, Lee, Still, and McDougall* or over *Nguyen, Lee, Still, and Mikos* all as applied above and in further view of *Cooke and Schwartz*

Claims 42-61 over:

- *Nguyen, Lee, and Still*; or
- *Nguyen, Lee, Still, and Murphey*, or
- *Nguyen, Lee, Still, and McDougall*; or
- *Nguyen, Lee, Still, and Mikos*;
- all as applied above and in further view of U.S. Application No. 2003/0060374 to Cooke (hereinafter "*Cooke*") and U.S. Application No. 2003/0125215 to Schwartz (hereinafter "*Schwartz*")

As discussed above, the combination of *Nguyen, Lee, and Still* and the combination of those references with any of *Murphey, McDougall, or Mikos* fails to establish that every limitation of independent claims 42, 49, and 55 was known in the prior art. In addition, *Cooke and Schwartz* do not remedy the deficiencies of the above combinations. Rather, the Office Action merely relied on *Cooke* for its disclosure of reducing the viscosity of a degradable polymer with a plasticizing agent. (Office Action at p. 13). As to *Schwartz*, the Office Action cites that reference for the proposition that poly-EO, poly-PG, and poly-EG can be used as friction reducers in fracturing fluids. (Office Action at p. 13).

Claims 43-48, 50-54, and 56-61 depend, either directly or indirectly, from claims 42, 49, and 55 and therefore include all the limitations of those independent claims, respectively. Thus, claims 42-61 are patentable over the above-listed combinations. (35 U.S.C. §112, paragraph 4). Accordingly, for at least these reasons, Applicants respectfully request withdrawal of this rejection.

IV. Request for Evidentiary Support

Once again, should any of the above asserted rejections be maintained, Applicants respectfully request appropriate evidentiary support. Additionally, if the Examiner is relying upon "common knowledge" or "well known" principles to establish the rejection, Applicants request that a reference be provided in support of this position

pursuant to MPEP § 2144.03. Furthermore, to the extent that the Examiner maintains any rejection based on an "Official Notice" or other information within the Examiner's personal knowledge, Applicants respectfully request that the Examiner cite a reference as documentary evidence in support of this position or provide an affidavit in accordance with MPEP § 2144.03 and 37 C.F.R. 1.104(d)(2).

V. No Waiver

All of Applicants' arguments and amendments are without prejudice or disclaimer. Additionally, Applicants have merely discussed example distinctions from the cited references. Other distinctions may exist, and Applicants reserve the right to discuss these additional distinctions in a later Response or on Appeal, if appropriate. By not responding to additional statements made by the Examiner, Applicants do not acquiesce to the Examiner's additional statements, such as, for example, any statements relating to what would be obvious to a person of ordinary skill in the art.

SUMMARY

In light of the above amendments and remarks, Applicants respectfully request reconsideration and withdrawal of the outstanding rejections. Applicants further submit that the application is now in condition for allowance, and earnestly solicit timely notice of the same. Should the Examiner have any questions, comments or suggestions in furtherance of the prosecution of this application, the Examiner is invited to contact the attorney of record by telephone, facsimile, or electronic mail.

Applicants hereby petition for a one-month extension of time to file this response under 37 C.F.R. § 1.136(a), extending the deadline from February 4, 2011 to March 4, 2011. Accordingly, Applicants have authorized via the Office's electronic filing system the Commissioner to debit the Deposit Account of McDermott Will & Emery, Deposit Account No. 500417, Order Number 086108.0180, in the amount of \$130.00 under 37 C.F.R. 1.17(a)(1) for the one-month extension of time.

Applicants believe that no additional fees are due in association with the filing of this response. Should the Commissioner deem that any fees are due, including any fees for extensions of time, Applicants respectfully request that the Commissioner accept this as a Petition Therefore, and direct that any additional fees be charged to McDermott Will & Emery's Deposit Account No. 500417, Order Number 086108-0180.

Respectfully submitted,

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